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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,741	06/27/2003	Richard F. Davis	024.0012	7727
29906	7590	03/02/2006	EXAMINER	
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			NGUYEN, DUC M	
			ART UNIT	PAPER NUMBER
			2685	

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,741	DAVIS, RICHARD F.	
	Examiner	Art Unit	
	Duc M. Nguyen	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 13-16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 5-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's response filed on 12/19/05. Claims 1-11, 13-16, 18-20 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **1-4, 13-16, 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable by Applicant's admitted prior art (Figs 1-2), hereafter **AAPA**, in view of **Bley** (US 4,534, 602).

Regarding claim **1**, **AAPA** discloses a prior art radio frequency system which would include all the claimed limitations (see Figs. 1-2 and [0016] through [0029]) except for a conductive elastomeric gasket shielding a portion of compressible bellows interconnects. However, **Bley** discloses a method for reducing radio frequency coupling between interconnects in a radio frequency system by placing at least one conductive elastomeric gasket in proximity to each interconnect such that said conductive elastomeric gasket contacts two components such as printed circuit boards. Since **AAPA** discloses an RF interconnector for IC circuit boards, it would have been obvious to one skilled in the art at the time the invention was made to provide the above

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teaching **Bley** to AAPA for incorporating such conductive elastomeric gasket in the RF interconnector system in AAPA as well, to form the shield of a plurality of coaxial connectors, for providing conductive paths of controlled impedance between IC circuit boards.

As to the newly-added limitation regarding the reduction of RF coupling by the conductive elastomeric gasket, it is noted that since the conductive elastomeric gasket is used to provide shielding for connectors, one of skilled in the art would recognize that the shielding would be used for reducing interferences or RF coupling. Therefore, the claimed limitation still made obvious by AAPA and Bley regarding RF coupling reduction.

Regarding claim **2**, the claim is rejected for the same reason as set forth in claim 1 above. In addition, since the use of top cap and bottom cap for a compressible bellows is known in the art, it would have been obvious to one skilled in the art at the time the invention was made to further modify **Bley** and AAPA to provide first cap and second cap as claimed, to ensure stable physical and electrical contact for the compressible bellows.

Regarding claim **3**, the claim is rejected for the same reason as set forth in claim 2 above. In addition, AAPA discloses a pin for coupling RF signals (see [0020]).

Regarding claim **4**, the claim is rejected for the same reason as set forth in claim 3 above. In addition, AAPA discloses a cylindrical shape for the compressible bellows (see Fig. 2).

Regarding claim **13**, the claim is interpreted and rejected for the same reason as set forth in claim 1 above. In addition, it is clear that AAPA and Bley would disclose a plurality of openings (holes) and major surfaces as claimed in order to provide contact areas for electrical connection (see AAPA, Figs. 1-2), wherein it would have been obvious to one skilled in the art to include a ground plane as disclosed by Bley (see col. 5, lines 10-48), for suppression interferences of external signals.

Regarding claim **14**, the claim is rejected for the same reason as set forth in claim 13 above. In addition, Bley discloses a clamping force (see Figs. 1a), for holding two circuit boards together.

Regarding claim **15**, the claim is rejected for the same reason as set forth in claim 14 above. In addition, it is clear that AAPA as modified would disclose the ground plane, integration plate, and each conductive elastomeric gasket combine to form a radio frequency shield around each opening of said plurality of openings in said integration plate (see Bley, col. 5, lines 10-48).

Regarding claim **16**, the claim is rejected for the same reason as set forth in claim 15 above. In addition, it is clear that AAPA as modified would disclose each dielectric sleeve, compressible bellows interconnect, and integration plate form a coaxial interconnect (see Bley, col. 5, lines 10-48).

Regarding claim **18**, the claim is interpreted and rejected for the same reason as set forth in claim 13 above. In addition, Bley discloses forming a plurality of through holes in a first component in a radio frequency system wherein said first component is electrically conductive (see Figs. 1a, 2a, and col. 3, lines 60-67), and placing at least

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one conductive elastomeric gasket in proximity to each interconnect such that said conductive elastomeric gasket contacts said first component and a second component (see Figs 1a, 2a and col. 3, lines 38-60).

Regarding claim **19**, the claim is rejected for the same reason as set forth in claim 18 above. In addition, it is clear that AAPA as modified would disclose the step of assembling the radio frequency system such that each compressible bellows interconnect is compressed and each of said at least one conductive elastomeric gasket in proximity to each interconnect is compressed thereby electrically coupling said first component to said second component (see Bley, Figs 1-2 and Abstract).

Regarding claim **20**, the claim is rejected for the same reason as set forth in claim 19 above. In addition, it would have been obvious to one skilled in the art at the time the invention was made to further modify **Bley** and AAPA to provide a step of forming a grounded shield radially around each compressible bellows interconnect when the radio frequency system is assembled, in order to prevent interferences from external signals to the system RF signal.

Allowable Subject Matter

3. Claims 5-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: As to claim 5, the cited prior art fails to disclose or make it obvious an RF high

frequency RF connectors which comprises component as specified in the claim, wherein a non-obvious feature comprises two end caps in combination with a compressible bellows interconnects which has a cylindrical shape, a layer of nickel alloy and a layer of gold.

Response to Arguments

4. Applicant's arguments filed 12/19/05 have been fully considered but they are not persuasive.

As to claim 1, on page 9 in the Remark, Applicant argues that claim 1 includes elements of original claim 17, which the Examiner indicated was allowable.

In response, the Examiner asserts that claim 1 does not include elements of original claim 17, and further assert that claim 17 is rejected under 35 USC 102 (b) as being anticipated by Bley, not contain allowable subject matters as erroneously argued by the Applicant.

As to claim 13, in the Remark, Applicant argues that none of the cited reference taken alone or in combination, disclose a "conductive elastomeric gasket for each of said plurality of openings for shielding and coupling said integration plate to a ground plane of said second module" .

In response, the Examiner asserts that since Bley discloses a plurality of plated through-holes (read on "openings") are formed within a ground plane formed on a side of the connector board (see col. 5, lines 30-40), AAPA and Bley as combined would disclose a "conductive elastomeric gasket for each of said plurality of openings for

shielding and coupling said integration plate to a ground plane of said second module" as claimed, for suppression interferences of external signals.

As to claim 18, in the Remark, Applicant argues that none of the cited reference discloses "placing at least one conductive elastomeric gasket in proximity to each interconnect such that said conductive elastomeric gasket contacts said first component and a second components".

In response, the Examiner asserts that Bley does disclose "placing at least one conductive elastomeric gasket in proximity to each interconnect such that said conductive elastomeric gasket contacts said first component and a second components" as claimed (see Figs 1a, 2a and col. 3, lines 38-60).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, since Bley discloses the motivation for utilizing a conductive elastomeric gasket to shield a portion of compressible bellows interconnects in a high frequency RF signal connectors (i.e, provide adequate shielding with a controlled characteristic impedance and require no insertion or removal force), it would have been obvious to one skilled in the art at the time the invention was made to provide the above teaching **Bley** to AAPA for

incorporating such conductive elastomeric gasket in the RF interconnector system in AAPA as well, to form the shield of a plurality of coaxial connectors, for providing conductive paths of controlled impedance between IC circuit boards require no insertion or removal force at low cost (see Bley, col. 2, lines 13-17, 52-60).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Since AAPA and Bley both direct to a high frequency RF signal connectors, their combination is proper.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. **Any response to this final action should be mailed to:**

Box A.F.

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893, Monday-Thursday (9:00 AM - 5:00 PM).

Or to Edward Urban (Supervisor) whose telephone number is (571) 272-7899.

Duc M. Nguyen



Feb 26, 2006